



State of Montana Project Management Office

Project Execution and Approval Phase

Critical Design Review Instructions

A checklist to guide a Critical Design Review (CDR). This review, from the Quality Rapid Product Development methodology (QRPD), is held when a prototype exists that everyone can huddle around and constructively criticize. At this point a critical innovation has passed the "chicken test" (an early "reality test" of the prototype). The final CDR reviews the system "chicken test" results. A signoff form is included as part of the template.

To convince everyone that a technical risk has been conquered or, alternately, that it's "time to go back to the drawing board ..." This is a project decision point for management: Is this project ready to proceed?

The Design Review should be organized and lead by the project team leader. Use the checklist to focus on whether the known technical risk areas have been successfully reduced or eliminated, and whether any new risk areas have been identified.

Definition of "Chicken Test": A reality test on a prototype that verifies the feasibility of the system, the critical parts and major innovations of the design. Should be performed within 25-50% of the overall schedule. The name derives from tests done on jet engines for collisions and ingestion of birds. It is done as part of a design "early warning" process to uncover flaws before investing the whole \$250 million dollars necessary to build a new engine.

Critical Design Review Checklist Items

(customize with your own items and details)

1. Has everybody done their preparation work?
2. Where do we stand regarding the innovative and risky parts of the design) and the other project risks on the Critical Issues and Dependencies Lists? How much has been done?
3. Can a demonstration of proof be shown? Review it.
4. What tests have been performed on these parts? What were the results? Did we pass the "chicken tests"?
5. Do we feel confident that the project can proceed as planned? Why?
 - If not, what do we need to do to get there? When will that be?

- Have we run into "show stoppers" that merit considering aborting the chosen design approaches, commencing other approaches or even aborting the whole project?
6. Have new critical issues been identified? Discuss them and add to the Critical Issues and Dependencies List. What will be done about them?
 7. What does the progress to date indicate about how realistic the project schedule is? Do we have further tradeoffs to make, based on the results of our chicken testing?

CDR Follow-Up:

1. Publish meeting minutes. Include action items assigned.
2. Reconvene if more research or tests are necessary to convince everyone that the risks have been shown to be acceptable for continuing as planned and/or to follow up on the assigned action items.
3. If this is CDR for the system chicken test results, get the appropriate Development executive to sign off on this critical project decision point. See the next page.
4. Revise the project schedule if necessary.
5. Meet the schedule.

Administrative Information

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